

***BEYOND BIOLOGY:  
UNDERSTANDING REGIONAL, MULTI-SPECIES HABITAT CONSERVATION PLANS  
FROM AN ECOLOGICAL, ECONOMIC, AND SOCIOPOLITICAL PERSPECTIVE***

A Senior Thesis

By

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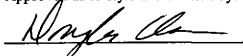
JENNIFER SCHMIDT

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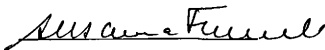
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## **Abstract**

### **Beyond Biology: Understanding Regional, Multi-species Habitat Conservation Plans From an Ecological, Economical, and Socio-political Perspective**

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The following thesis is a politically and socially relevant product of the controversy surrounding the reauthorization of the Endangered Species Act and the highly debated role that regional, multi-species habitat conservation plans will play in the future of endangered species policy. Little research has been performed on the ecological impacts of these plans, and even less on their acceptance by stakeholders involved in the planning process and the degree to which a “creative partnership” between the needs of listed species and economic development has truly been achieved. My objective in this research is to determine the actual and perceived costs and benefits of regional, multi-species Habitat Conservation Plans. I have attempted to fulfill this objective through a survey measuring people’s attitudes regarding regional, multi-species habitat conservation plans in three general areas: ecological, economical, and socio-political costs and benefits of the plans. In addition, I have studied the actual texts of habitat conservation plans and planning documents in order to identify the elements of a conservation plan which lead to its acceptance among the diverse interests involved in the development process.

## Table of Contents

	Page
Abstract .....	ii
Table of Contents .....	iii
List of Tables .....	iv
List of Figures .....	v
Introduction.....	1
Methods .....	9
Results .....	17
Discussion.....	34
Conclusions.....	45
Literature Cited .....	47
Appendix A – Survey and Cover Letter.....	49
Appendix B - Glossary .....	54

## List of Tables

	Page
Table 1. Plans meeting criteria for RSMHCPs .....	11
Table 2. Survey distribution and response rates .....	18
Table 3. Sources of assistance.....	21
Table 4. Economic effects of plan on landowners & developers.....	21
Table 5. Administrative burden on landowners & developers.....	22
Table 6. Total cost of plan development .....	23
Table 7. Length of time of the planning process.....	24
Table 8. Effect of RSMHCPs on regional economy vs. individual plans .....	25
Table 9. Degree of participation in the HCP process .....	27
Table 10. Groups formed.....	28
Table 11. Who's at the table? Degree of representation of stakeholder groups .....	28
Table 12. Areas of success (by plan).....	29
Table 13. Changes in ESA attitudes (by plan).....	32
Table 14. Changes in ESA attitudes (by respondent).....	32

## List of Figures

	Page
Figure 1. Growth of habitat conservation plans .....	4
Figure 2. Distribution of respondents, by respondent classification per plan .....	19
Figure 3. Ecological consequences (by plan).....	20
Figure 4. Ecological consequences (by respondent).....	20
Figure 5. Economic effects on landowners & developers (by respondent) .....	22
Figure 6. Administrative effects on landowners & developers (by respondent).....	23
Figure 7. Effect on regional economy.....	25
Figure 8. Actual vs. ideal allocation of costs of endangered species conservation.....	26
Figure 9. Areas of success (by respondent) .....	29
Figure 10. Evaluating Regional vs. individual plans using multiple variables.....	31

## Introduction

In 1973, amidst of swirl of landmark environmental legislation, Congress passed the Federal Endangered Species Act (ESA). The ESA has the reputation of being one of the most stringent, yet arguably one of the most effective, pieces of environmental legislation this nation has. The ESA's authority stems primarily from Section 9 of the Act, in which the "take" of any species listed as endangered or threatened under the ESA is prohibited. Take is defined by the ESA to mean "to harass, harm, pursue, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct" (FWS and NMFS 1996). In 1975, the Department of the Interior issued a regulation (50 C.F.R. SS 17.3) further defining "harm" to include "significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering" (Irvin 1995).

This strict definition of take has resulted in restrictions placed on activities occurring on private lands, and in some cases has resulted in significant losses in the economic value of land. To reconcile the inability of private landowners to fully use or develop their lands with the need for rigorous protection of species on the brink of extinction, a "creative partnership" (FWS and NMFS 1996) between the needs of endangered species and economic development was proposed. The ESA was amended in 1982 to allow for take of listed species inadvertent to an otherwise lawful activity upon approval of a conservation plan which would mitigate the effects of the take, and following issuance of an Incidental Take Permit (ITP). Up until 1982, only take occurring during scientific research and other conservation actions could be authorized under the ESA (FWS and NMFS 1996). Under section 10(a) of the amended ESA, a permit may be issued to a non-federal entity, such as a state or local government or public agency, a tribe, or a private

landowner. The ITP allows the permittee to engage in lawful activities that may result in take of listed species, provided that the take is incidental to the purpose of the project (Hopkins and Vasey 1997). The U.S. Fish and Wildlife Service (FWS) and, in cases of endangered salmon, the National Marine Fisheries Services (NMFS), are the agencies responsible for overseeing implementation of the ESA, including the conservation plan approval process and issuance of ITPs.

Habitat Conservation Plans (HCPs) are a necessary and pivotal step in the permitting process. Issuance of an ITP is dependent upon approval of a conservation plan that would meet the following set of criteria for all species covered:

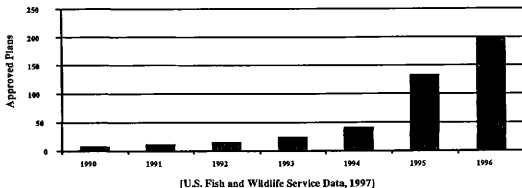
- the taking will be incidental to an otherwise lawful activity,
- the applicant will, to the maximum extent practicable, minimize and mitigate the impacts of such taking,
- the applicant will ensure that adequate funding for the HCP and procedures to deal with unforeseen circumstances will be provided
- the taking will not appreciably reduce the likelihood of survival and recovery of the species in the wild and
- the applicant will ensure that other measures that the Services may require as being necessary or appropriate will be provided (FWS and NMFS 1996).



### The Evolution of HCPs

In the decade following the establishment of the HCP process, only fourteen Incidental Take Permits were issued. As of September, 1997, that number exceeded 220 plans covering approximately 5 million acres, with roughly 200 more in varying stages of development (Hood 1998). HCPs have experienced unprecedented growth not only in number of plans (Fig. 1), but also in size of plans and scope of species and habitats covered. According to the *Habitat Conservation Planning Handbook* (FWS and NMFS 1996):

of the 100 HCPs being developed as of early 1996, approximately 25 exceed 10,000 acres, 25 exceed 100,000 acres, and 18 exceed 500,000 acres. This suggests that HCPs are evolving from a process developed primarily to address single developments to broad-based, landscape level planning tools utilized to achieve long-term conservation goals for listed and unlisted species, while allowing applicants to proceed with their land use and development (FWS and NMFS 1996).



**Fig. 1 - Growth of habitat conservation plans**

There are a number of possible hypotheses to explain the dramatic increase in habitat conservation plans and the trend towards larger, multi-species plans. In 1996 the FWS and

NMFS published the *Habitat Conservation Planning Handbook*. With respect to regional, multi-species plans, the handbook states that one of its “guiding principles” is to “encourage state and local governments and private landowners to undertake regional and multi-species HCP efforts as appropriate and [FWS and NMFS] will assist such efforts to the maximum extent practicable” (FWS and NMFS 1996). The handbook has been largely responsible for exposing the HCP planning process to the public, as well as clarifying many of the new regulatory assurances to landowners proposed by the Clinton Administration. The most significant of these assurances, and perhaps the single greatest impetus for landowners to engage in the HCP process, has been the “No Surprises” policy (Moser 1997).

The no surprises policy drafted in 1994, went through a public comment period as part of the draft 1994 *Habitat Conservation Planning Handbook*, and was included in the final 1996 *Habitat Conservation Planning Handbook*, and currently is being implemented. “No Surprises” states that landowners who comply with the terms of the approved habitat conservation plan and implement the plan in good faith will never have to provide any additional land or financial compensation for species mitigation beyond that specified in the HCP. If the species nevertheless decline, the responsibility for additional mitigation lies with the government. Since HCPs can last up to 100 years and cover hundreds of thousands of acres, this policy becomes extremely appealing to landowners and encourages coordinated, multi-species planning efforts.

## **Ecology**

Large-scale habitat conservation planning presents an entirely new and extremely complex set of challenges for land managers. On the one hand, regional, ecosystem level planning has the potential to provide real, substantive biological benefits to threatened and

endangered species. One of the most common criticisms of smaller, individual HCPs is that they produce a patchwork of fragmented mitigation parcels and rarely address the cumulative impacts of separate plans on the species and the ecosystem. Multi-species, multi-habitats HCPs consider the effects of take and mitigation efforts at a landscape level. A recent Princeton University Author (199 ) recently reported that “Maintenance of self-sustainable populations ultimately will depend on the preservation and restoration of ecosystems. The logic of species recovery therefore should shift from individual species to entire habitats” (Feiveson et al. 1997).

Regional, multi-species HCPs (RMSHCPs) may also include strategies for the conservation of candidate or proposed species and other unlisted species. These plans may serve as a preventative tool, thus minimizing the cost of recovery. Conversely, covering unlisted species under an HCP can also become a point of dissent among conservationists and landowners. Often, little is known about unlisted species, and the science upon which the conservation strategies outlined in the plan are based may be inadequate to successfully sustain the species’ population. A lack of scientific data on unlisted species is problematic because landowners covering unlisted species in an HCP don’t have additional responsibilities to the species if the species should become listed, other than the responsibilities described in the original HCP.

## **Economics**

Preparing a RMSHCP is a daunting task, with the planning process taking many years and costing over \$1 million to develop, not including expenditures on land acquisition and implementation. Yet, RMSHCPs are experiencing significant growth, in large part because the

long-term economic benefits to landowners appear to outweigh the high up-front costs of plan development. Some examples of the economic benefits of an RMSHCP to landowners are:

- maximum flexibility and available options in developing mitigation programs;
- reduced economic and administrative burden of mitigation programs by distributing their impacts;
- long-term regulatory assurances and an increased amount of species for which such assurances can be given;
- a broad range of development activities covered by the permit's legal protection, and;
- a reduction of the regulatory burden of ESA compliance for all participants (FWS and NMFS 1996).

### **Socio-political**

Regional, multi-species HCPs may potentially provide a forum for many groups to cooperate in the development of an ecologically sound plan that is accepted by all stakeholders. Local governments have been the lead entity for these plans, and generally have a greater commitment to meeting the needs of all stakeholders and soliciting public involvement than private landowners. Generally, a consultant develops the plan, and a steering committee composed of individuals representing affected interests or stakeholders in the conservation planning program is formed to guide development of the HCP. The steering committee recommends appropriate development, land use, and mitigation strategies, and communicates progress to their larger constituencies (FWS and NMFS 1996).

One drawback to larger planning efforts is their complexity and the multitude of issues that must be addressed during the planning process. Conservationists are often frustrated by a

lack of science in plans. Governments and development interests are frustrated by the great deal of money and the several years it often takes to develop a regional HCP. The farming community may have irreconcilable opposition to plans that put pressure on agricultural lands. Yet, according to the Institute for Ecological Health (1997), "Whether liked by different interests or not, regional conservation planning appears here to stay." The concern then is to make these plans work for landowners and other economic interests, for communities and governments, and for the species that desperately need protection, to the maximum extent possible. Habitat conservation planning at a regional level becomes a socio-political exercise as much as a biological exercise (Hopkins and Vasey 1997).

#### **The Political Relevance and Context of RSMHCPs**

Since 1992, the Federal Endangered Species Act has been awaiting reauthorization. A number of draft bills have been circulated in this time but none have been able to satisfy the needs and interests of both environmentalists and development interests in any substantive way. One of the most contentious issues in ESA reauthorization has concerned the takings issue and private property rights. Current reauthorization bills in Congress specifically addresses the issue of multi-species, multi-habitats conservation planning. It is easy to see how HCPs would be implicated in this dialogue.

In the context of new and greater regulatory assurances for landowners, such as the "No Surprises" policy, the controversy surrounding large scale HCPs has intensified. On the one hand, these regulatory assurances are necessary to entice landowners into initiating the conservation planning process. The flipside is that in light of insufficient scientific data regarding threatened and endangered populations, we can not afford to release the permittee from

any and all additional mitigation that may become necessary. If the burden of additional mitigation rests solely with the federal government, a declining species covered by an ITP may dwindle into extinction before federal funds and/or land becomes available to stop the downward spiral of endangered species decline (Defenders 1998).

One especially troubling assessment of the no surprises policy comes from a statement issued by scientists from a meeting at Stanford University (Brussard et al. 1997). In this report, the panel contends that no surprises “runs counter to the natural world, which is full of surprises... The inherent dynamic complexity of natural biological systems precludes accurate, specific prediction in most situations; and human activities greatly add to and compound this complexity.” In the span of 100 years, the maximum duration of HCPs, changes to the landscape will occur, and their impact on imperiled species, even those covered in a sound habitat conservation plan, could potentially be disastrous.

## **Research Objective**

My objective in this study is **to determine the actual and perceived costs and benefits of regional, multi-species Habitat Conservation Plans**. I am addressing this objective through three areas of inquiry:

1. Ecological Benefits – Will the plan result in a net benefit and/or the recovery of the species listed? Will the plan prevent unlisted species from becoming endangered? What scientific resources were used in developing the plan? Will the regional, multi-species plan have a more beneficial effect on species that a conglomeration of smaller, individually owned plans?

2. **Economic Benefits** – What is or will be the impact of a plan on a regional economy? Are the costs and time involved in developing a plan reasonable? Will the costs and administrative aspect of developing a plan impede development?
3. **Socio-political Benefits** – How has this process changed people's attitudes towards endangered species conservation? Were all stakeholders "at the table" during the planning process? Were there opportunities for public participation during the planning process? Was a compromise struck that was acceptable to all stakeholders?

## **Methods**

I adopted two different research strategies to address the issue of actual and perceived costs and benefits of regional, multi-species HCPs. The first strategy involved a survey sent to the stakeholders of fifteen RSMHCPs that met a set of predefined criteria. The next step was to gain copies of the habitat conservation plans (or draft plans if plan not yet completed) and analyze elements of the actual text. Lastly, I took these two approaches and compared people's attitudes and perceptions of the plans to the actual content of the plans.

### **Selection of Plans**

My criteria for selecting habitat conservation plans for analysis in this report were:

1. The plans must be regional in scope. The plans must cover at least 100,000 acres.
2. The plans must be multi-species. The plans must cover at least 3 threatened, endangered, or unlisted species.

The plans could be in any stage of development, from early planning stages to issuance of an ITP. I also considered habitat conservation plans that achieved the draft stage but for which negotiations then dissolved and an ITP was never issued. Although these plans are no longer active, I felt that perceptions of these plans and elements of the failed plans would facilitate understanding of why the HCP process is or isn't successful.

The plans for the study were identified using a database of all HCPs completed or in progress obtained from the National Audubon Society (NAS). The NAS database contained a short description of each plan, including size and species covered, and had been last updated in August, 1997. From this list I selected thirty plans that met my criteria for RSMHCPs. From these thirty plans, fifteen plans were selected. I reasoned that fifteen plans was enough to give a representative sample of RSMHCPs and would be feasible considering the restraints of time and funding to complete this study. A specific number of plans based on the proportion of plans in process or in existence in each state was allocated to be selected from each state. In doing so, I attempted to ensure regional representation. Table 1 shows the allocation of plans for each state.

Once the number of plans to be selected from each state had been set, systematic random sampling technique using a table of random numbers was used to select the fifteen plans for this study from the list of RSMHCPs.

**Table 1 - Plans meeting criteria for RSMHCPs**

State	Met Criteria	Selected
CA	16	6
WA	5	2
OR	3	2
FL	2	1
TX	1	1
AZ	1	1
NV	1	1
UT	1	1
Total	30	15



## **Survey Design**

The survey was designed to include questions assessing the three areas of inquiry: ecology, economy, and socio-political. The survey was anonymous, but was coded with the category of respondent that it was sent to. Before being distributed, the survey instrument secured the approval of the Texas A&M University Institutional Review Board (IRB). The survey package included:

- A cover letter explaining the purpose of the study (Appendix B);
- The survey instrument (Appendix B); and
- A self-addressed stamped envelope.

To help ensure a high rate of response to the survey, follow-up postcards were sent to all survey recipients a few days before the due date of the survey.

## **Pre-test**

A pre-test of the survey instrument was performed using the Coachella Valley HCP, one of the RSMHCPs not selected for this study. The results of the survey and the comments added by the respondents were used to make changes to the survey instrument. Subsequent response rates from the amended survey were greatly improved over the response rate from the pre-test.

## **Selecting the Sample**

I sought to select survey participants associated with a plan that represented the mix of stakeholders on the steering committee of that plan.

I was able to obtain names and contact information for the majority of participants in the survey from lists of steering committee members of the plans. This was an effective way to fashion a representative sample as steering committees were generally designed to represent all interested parties and stakeholders. Where there wasn't a steering committee in place or where contact information was not available, I communicated with a variety of state and local officials and agency staff, Fish and Wildlife Service agents, landowners and developers, and environmental groups to compile my database of survey participants.

I divided the selected participants into five categories:

- B – Independent scientists and staff of federal, state, and local wildlife and land planning agencies (i.e. Bureau of Land Management (BLM), California Department of Fish and Game (CDFG))
- C – City and county officials and employees of public works agencies, local utilities, etc.
- E - Environmentalists
- F – U.S. Fish and Wildlife Service (FWS) and National Marine Fisheries Services (NMFS) officials.
- L – Private landowners, developers, and multi-users (i.e. agriculture, mining, off-road vehicle users, etc.)

### **Narrowing the Study**

Upon preliminary inspection of the survey results, I noticed a large discrepancy in the response rates of the multi-landowner, development HCPs versus the timber HCPs. Respondents from timber HCPs also left many questions omitted, and their comments expressed confusion towards many of the questions asked. Upon reexamination of my survey instrument, I felt that

the questions were more suited to multi-landowner, development HCPs. I decided to discard the results of the five HCPs dealing with timber management, leaving me with ten regional, multi-species HCPs that now conformed to an additional set of criteria:

- The permit holder must be a state or local jurisdiction.
- The plans must apply to multi-landowners.
- The plans must be designed to allow for take resulting from development activities.

### **Description of Plans Analyzed**

Below is a brief description of each of the ten remaining plans that I will focus on in my data analysis and discussion of actual and perceived costs and benefits of RMSHCPs.

**Balcones Canyonlands Conservation Plan (BCCP<sup>1</sup>)**: Status – ITP issued 5/96; Location – Travis Co., TX; Duration – 30 yrs.; Size – 561,000 acres with a 30,000 acre reserve; Species covered – golden checked warbler (*Dendroica chrysoparia*), black-capped Vireo (*Vireo atricapillus*), 6 cave invertebrates, and 27 rare, unlisted species; Purpose – development; Permit holder<sup>2</sup> – City of Austin and Travis Co.

**Brevard Scrub Conservation and Development Plan (BREV)**: Status – Draft issued 8/95, abandoned; Location – Brevard Co., FL; Duration – 30 yrs.; Size – 450,000 acres with a 9,000-10,000 acre Scrub Sanctuary; Species covered – Florida scrub jay (*Aphelocoma coerulescens*), Eastern indigo snake (*Drymarchon corais couperi*), gopher tortoise (*Gopherus polyphemus*), and 6 other animal species and 12 plant listed as threatened, endangered, or

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<sup>1</sup> The four-letter abbreviation for each plan is one I used for the purpose of this study but is not necessarily the official abbreviation or acronym for the plan.

candidate species under the ESA; Purpose – residential development; Permit holder – Brevard Co.

**Clark County Multi-species Habitat Conservation Plan (CLRK)**: Status – In progress, draft issued; Location – Clark, Lincoln, Nye Cos., NV; Duration – 30 yrs.; Size – 5.1 million acres; Species covered – Mojave desert tortoise (*Gopherus agassizii*), peregrine falcon (*Falco peregrinus*), southwestern willow flycatcher (*Empidonax traillii extimus*), Moapa dace (*Moapa coriacea*), woundfin (*Plagopterus argentissimus*), Virgin River chub (*Gila seminuda*), and 70 other unlisted species of concern; Purpose – development, recreation; Permit holder – Clark Co., NV

**Lower Colorado River Multi-species Conservation Program (LCRP)**: Status – in progress, draft due ~6/99; Location – 100 yr. Flood plain from Glen Canyon Dam to Mexican border, AZ, NV, CA; Duration – 50 yrs., Size – 250,000 square miles, Species covered – 102 species, focus on native fish; Purpose – providing water and power; Permit holder – Multiple

**Central and Coastal Orange County Natural Community Conservation Planning Program (NCCP)**: Status – permit issued 7/96; Location – Orange Co., CA; Duration – 75 yrs., Size – 208,000 acres, including a 38,738 acre reserve; Species covered – coastal California gnatcatcher (*Polioptila californica californica*), peregrine falcon (*Falco peregrinus*), Riverside fairy shrimp (*Streptocephalus woottoni*), southwestern arroyo toad (*Bufo microscaphus californicus*), least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*),

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<sup>2</sup> Permit holder in this case may refer to the permit holder, the proposed permit holder, or the party that would have been the permit holder had an ITP been issued.

Pacific pocket mouse (*Perognathus longimembris pacificus*), and 37 rare, unlisted species;

Purpose – conserve the coastal sage ecosystem and provide for development; Permit holder –

FWS, CDFG, others

**San Diego Multi Species Conservation Program (SDMS):** Status – ITP issued 7/97; Location – southwest San Diego Co., CA; Duration – 50 yrs.; Size – 582,243 acre planning area, including a 171,917 acre conservation area; Species covered – least Bell’s vireo (*Vireo bellii pusillus*), California least tern (*Sterna antillarum browni*), southwestern willow flycatcher (*Empidonax traillii extimus*), California gnatcatcher (*Poliophtila californica californica*), western snowy plover (*Charadrius alexandrinus nivosus*), brown pelican (*Pelecanus occidentalis*), and others for a total of 17 federally listed species and 68 unlisted species; Purpose - development ;Permit holder – County of San Diego

**South Sacramento County Habitat Conservation Plan (SSAC):** Status – in progress, no draft issued; Location – Sacramento Co., CA; Duration - Undecided; Size – 350,000 acres; Species covered – federally listed species under consideration for coverage under the HCP include American peregrine falcon (*Falco peregrinus anatum*), Aleutian Canada goose (*Branta canadensis leucopareia*), bald eagle (*Haliaeetus leucocephalus*), Conservancy fairy shrimp (*Branchinecta conservatio*), vernal pool fairy shrimp (*Branchinecta lynchi*), valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), vernal pool tadpole shrimp (*Lepidurus packardi*), giant garter snake (*Thamnophis gigas*), and 49 unlisted species; Purpose – urban development and agriculture; Permit holder – Sacramento Co.

**Tulare Association of Governments Habitat Conservation Plan (TULR):** Status – abandoned; Location – western Tulare Co., CA; Duration – 20 yrs.; Size – 1,088,000 acres; Species covered – San Joaquin kit fox (*Vulpes macrotis mutica*), blunt-nosed leopard lizard (*Gambelia stia*), Tipton kangaroo rat (*Dipodomys nitratoides nitratoides*), and 52 other species of concern; Purpose – urban development and agriculture; Permit holder –Tulare County Association of Governments (TCAG)

**Washington County Habitat Conservation Plan (WASH):** Status – permit issued 3/96; Location – Washington Co., UT; Duration – 20 yrs.; Size – 135,000 acres including a 61,022 acre reserve; Species covered – Mojave Desert tortoise (*Gopherus agassizii*), dwarf bear-claw poppy (*Arctomecon humilis*), woundfin minnow (*Plagopterus argentissimus*), Virgin River chub (*Gila robusta seminuda*), peregrine falcon (*Falco peregrinus*), bald eagle (*Haliaeetus leucocephalus*), Siler pincushion cactus (*Pediocactus sileri*), Mexican spotted owl (*Strix occidentalis lucida*), southwestern willow flycatcher (*Empidonax traillii eximius*), and 29 unlisted species; Purpose – commercial and residential development; Permit holder – Washington Co.

**West Mojave Coordinated Management Plan (WMJV):** Status – in progress; Location – Inyo, Kern, LA, San Bernadino Cos., CA; Duration - ?; Size – 9,400,000; Species covered – desert tortoise (*Gopherus agassizii*), many other unlisted species; Purpose - ?; Permit holder - ?

## Results

The purpose of this study is to examine the perceived costs and benefits of RSMHCPs as a whole, rather than focus on the successes of individual plans. Yet, for some questions, responses were broken down into responses for individual plans in an attempt to identify which plans were perceived as successful or unsuccessful for comparison with the text of these plans. The purpose of this survey is to measure perceptions. Certain groups of stakeholders may hold certain biases, but that is the reality of conservation planning. This survey was designed to represent the diverse and oftentimes competing interests as realistically as possible. Below is a summary of the response rates for each plan (Table 2) and for each group of respondents by type (Fig. 2).

**Table 2 – Survey distribution and response rates**

Plan	Surveys Sent	Surveys Received	Response Rate
BCCP	24	16	66.67%
BREV	17	9	52.90%
CLRK	26	15	57.70%
LCRP	22	15	68.20%
NCCP	13	8	61.50%
SDMS	46	21	45.70%
SSAC	16	9	56.30%
TULR	31	18	58.10%
WASH	21	12	57.10%
WMJV	40	16	40.00%
TOTAL	256	139	54.70%

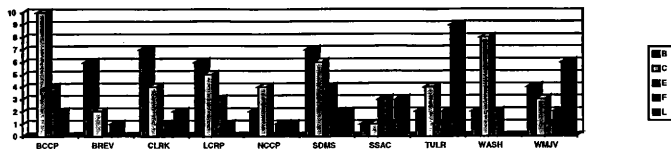


Fig. 2 – Distribution of respondents, by respondent classification per plan

I have divided survey results into three functional categories: ecology, economy, and socio-political. Each section contains the results of questions pertaining to their respective topics.

### Ecology

Question 1 – How would you describe the future ecological consequences of (the plan)<sup>3</sup>?

- The plan will contribute significantly to the recovery of populations.
- The plan will have a small but positive effect on populations.
- The plan will have no effect on populations.
- The plan will have a small but negative effect on populations.
- The plan will contribute significantly to the extinction of populations.

<sup>3</sup> "(the plan)" was replaced in each survey with the name of the HCP of significance to the participant



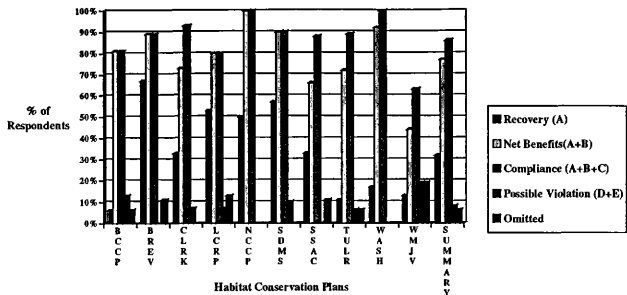


Fig. 3 - Ecological consequences (by plan)

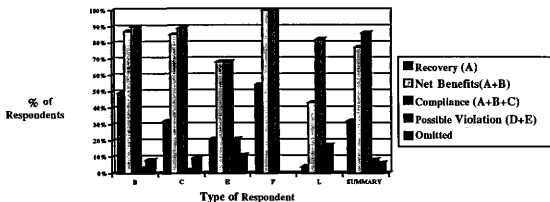


Fig. 4 Ecological consequences (by respondent)

Question 2 - To the best of your knowledge, what sources of assistance will be used in developing (the plan)? (circle all that apply)

- a) The National Academy of Sciences
- b) Environmental groups
- c) United States Geological Survey
- d) Independent Scientists
- e) Recovery plans for the species covered
- f) USFWS/NMFS
- g) other \_\_\_\_\_

After gaining further knowledge of the resources commonly used in plan development and the benefits of using those resources, between the time of issuing the survey and analyzing the results, I have decided the two aspects of this question relevant to the goals of the study are “d,” the use of independent scientists and “e,” the use of recovery plans for the species covered. The results are then as follows:

<b>Table 3 – Sources of assistance</b>
<i>Did independent scientists and/or recovery plans assist in HCP development?</i>
Independent Scientists - 103 responded affirmatively; 74.1%
Recovery Plans - 80 responded affirmatively; 57.6%

### Economy

Question 3 - The economic effects (the plan) will have on landowners/developers could be best described as:

- a) A strong hindrance to development
- b) An inconvenient economic hurdle to cross prior to development
- c) An accepted cost of development
- d) Favorable to the landowner/developer
- e) Very favorable to the landowner/developer

Table 4 - Economic effects of plan on landowners & developers														
	# Resp.	A	B	C	D	E	Omit		A	B	C	D	E	Omit
B	37	1	4	20	8	2	2	3%	11%	54%	22%	5%	5%	
C	47	7	13	10	10	4	3	15%	28%	21%	21%	9%	6%	
E	19	0	5	4	7	1	2	0%	26%	21%	37%	5%	11%	
F	13	0	4	6	3	0	0	0%	31%	46%	23%	0%	0%	
L	23	11	5	2	3	1	1	48%	22%	9%	13%	4%	4%	
TOTAL	139	19	31	42	31	8	8	14%	22%	3%	22%	6%	6%	

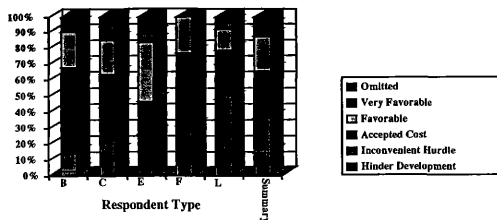


Fig. 5. Economic effects on landowners & developers (by respondent)

Question 4 - What effect will the administrative aspect of developing (the plan); including paperwork, time spent developing the plan, meetings, and consultations; have on the landowners/developers involved?

- The administrative aspect of developing the plan will be a strong hindrance to development.
- The administrative aspect of developing the plan will be an inconvenient hurdle to cross prior to development.
- The administrative aspect of developing the plan will be an accepted consequence of applying for an Incidental Take Permit and was not considered to be a burden.
- The administrative aspect of developing the plan will have no effect on the landowners/developers.

Table 5 - Administrative burden on landowners & developers

	# Resp.	A	B	C	D	Omit	A	B	C	D	Omit
B	37	1	10	16	8	2	3%	27%	43%	22%	5%
C	47	8	10	13	12	4	17%	21%	28%	26%	9%
E	19	1	4	7	4	3	5%	21%	37%	21%	16%
F	13	1	7	3	1	1	8%	54%	23%	8%	8%
L	23	9	7	2	2	3	39%	30%	9%	9%	13%
TOTAL	139	20	38	41	27	13	14%	27%	29%	19%	9%

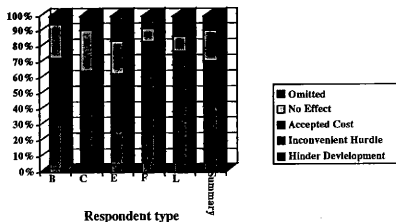


Fig. 6. Administrative effects on landowners & developers (by respondent)

Question 5 - After the plan has been completed, what would you estimate to be the total costs of developing (the plan), from its initiation to issuance of the Incidental Take Permit

- Less than \$5,000
- \$5-10,000
- \$10-50,000
- \$50,000-100,000
- \$100,000-500,000
- \$500,000-\$1,000,000
- More than \$1,000,000

	# resp.	A	D	E	F	G	Omit	A	D	E	F	G	Omit
BCCP	16	1	3	4	6	2		6%	19%	25%	38%	13%	
BREV	9	0	8	1	0	0		0%	89%	11%	0%	0%	
CLRK	15	0	4	4	5	2		0%	27%	27%	33%	13%	
LCRP	15	0	0	0	15	0		0%	0%	0%	100%	0%	
NCCP	8	0	0	2	6	0		0%	0%	25%	75%	0%	
SDMS	21	0	0	2	19	0		0%	0%	10%	90%	0%	
SSAC	9	0	2	2	4	1		0%	22%	22%	44%	11%	
TULR	18	1	11	3	0	3		6%	61%	17%	0%	17%	
WASH	12	0	2	3	6	1		0%	17%	25%	50%	8%	
WMJV	16	0	0	2	12	2		0%	0%	13%	75%	13%	
<b>TOTAL</b>	<b>139</b>	<b>2</b>	<b>30</b>	<b>23</b>	<b>73</b>	<b>11</b>		<b>1%</b>	<b>22%</b>	<b>17%</b>	<b>53%</b>	<b>8%</b>	

Question 6 - How long do you believe the permitting process will take, from its initiation to issuance of the Incidental Take Permit for (the plan)?

- a) Less than 6 months
- b) 6 months - 1 year
- c) 1 - 1.5 years
- d) 1.5 - 2 years
- e) 2 - 3 years
- f) 3 - 4 years
- g) more than 4 years

**Table 7 – Length of time of the planning process**

	# resp.	A	B	C	D	E	F	G	Omit	A	B	C	D	E	F	G	Omit
BCCP	16	0	0	0	1	1	1	11	2	0%	0%	0%	6%	6%	6%	69%	13%
BREV	9	0	0	0	4	3	1	3	2	0%	0%	0%	44%	33%	11%	33%	22%
CLRK	15	0	3	1	0	4	0	1	2	0%	20%	7%	0%	27%	0%	7%	13%
LCRP	15	0	1	0	1	1	8	5	0	0%	7%	0%	7%	7%	53%	33%	0%
NCCP	8	0	0	0	0	0	3	3	1	0%	0%	0%	0%	0%	38%	38%	13%
SDMS	21	0	0	0	0	0	4	15	2	0%	0%	0%	0%	0%	19%	71%	10%
SSAC	9	0	0	0	0	0	3	3	3	0%	0%	0%	0%	0%	33%	33%	33%
TULR	18	0	1	0	0	1	0	12	4	0%	6%	0%	0%	6%	0%	67%	22%
WASH	12	0	1	0	1	0	4	5	1	0%	8%	0%	8%	0%	33%	42%	8%
WMJV	16	2	2	3	1	0	2	5	1	13%	13%	19%	6%	0%	13%	31%	6%
<b>TOTAL</b>	<b>139</b>	<b>2</b>	<b>8</b>	<b>4</b>	<b>8</b>	<b>10</b>	<b>26</b>	<b>63</b>	<b>18</b>	<b>1%</b>	<b>6%</b>	<b>3%</b>	<b>6%</b>	<b>7%</b>	<b>19%</b>	<b>45%</b>	<b>13%</b>

Question 7 - What effect will (the plan) have on the regional economy and on the number of jobs available in the region?

- a) The plan will have a positive effect on the regional economy.
- b) The plan will have no effect on the regional economy.
- c) The plan will have a negative effect on the regional economy.

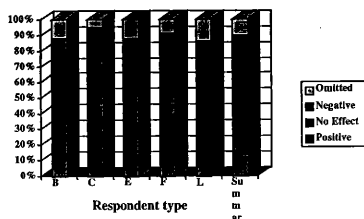


Fig. 7. Effect on regional economy

Question 8 - Do you believe that (the plan) will have a \_\_\_\_\_ effect on the regional economy when compared to the effects of individual HCPs.

- Significantly better
- Slightly better
- No effect
- Slightly worse
- Significantly worse

	# Resp.	A	B	C	D	E	Omit		A	B	C	D	E	Omit
B	37	18	13	1	0	1	4		49%	35%	3%	0%	3%	11%
C	47	24	14	5	0	1	3		51%	30%	11%	0%	2%	6%
E	19	6	5	2	0	0	6		32%	26%	11%	0%	0%	32%
F	13	9	2	2	0	0	0		69%	15%	15%	0%	0%	0%
L	23	0	4	4	4	8	3		0%	17%	17%	17%	35%	13%
<b>TOTAL</b>	<b>139</b>	<b>57</b>	<b>38</b>	<b>14</b>	<b>4</b>	<b>10</b>	<b>16</b>		<b>41%</b>	<b>27%</b>	<b>10%</b>	<b>3%</b>	<b>7%</b>	<b>12%</b>

Question 13 - Who bears the costs of endangered species conservation? (number in order, with 1 being the party bearing the most costs of endangered species conservation, and 5 bearing the least) (See Fig. 8)

- The federal government/taxpayers \_\_\_\_\_
- The state government \_\_\_\_\_
- County and city governments in areas covered by the plan \_\_\_\_\_
- Landowners/developers \_\_\_\_\_
- Environmental groups and other concerned citizen groups \_\_\_\_\_

Question 14 - Who should bear the costs of endangered species conservation? (number in order, with 1 being the party most responsible for bearing the costs of conservation, and 5 being least responsible) (See Fig. 8)

- a) The federal government/taxpayers \_\_\_\_\_
- b) The state government \_\_\_\_\_
- c) County and city governments in areas covered by the plan \_\_\_\_\_
- d) Landowners/developers \_\_\_\_\_
- e) Environmental groups and other concerned citizen groups \_\_\_\_\_

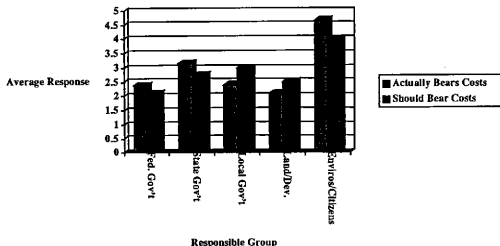


Fig. 8. Actual vs. ideal allocation of costs of endangered species conservation

### Socio-political

The following group of questions measured representation, participation, and cooperation of diverse interests in the planning process.

Question 9 - Indicate whether the following stakeholders are represented in the HCP development and implementation process by marking the appropriate letter in the space provided.

- A = Party has a major role in the HCP development and implementation process.
- B = Party has adequate opportunity to participate in the HCP development and implementation process, and has had a substantial but not major role in the process.
- C = Party has adequate opportunity to participate in the HCP development and implementation process, but has had very little or no role in the process.

D = Party has little opportunity to participate in the HCP development and implementation process, and has had little role in the process.

E = Party has no opportunity to participate in the HCP development and implementation process and has had no role in the process.

F = Don't know

- a) Environmental groups \_\_\_\_\_
- b) Developers/landowners \_\_\_\_\_
- c) City and county governments \_\_\_\_\_
- d) Independent scientists \_\_\_\_\_
- e) FWS/NMFS \_\_\_\_\_
- f) State officials \_\_\_\_\_
- g) Congressional representative \_\_\_\_\_
- h) Concerned citizens \_\_\_\_\_
- i) Organizations representing the interests of landowners/developers \_\_\_\_\_

**Table 9 - Degree of participation in the HCP process**

	A	B	C	D	E	F+O	A	B	C	D	E	F+O	Participation Index <sup>4</sup>
Environmental Groups	77	38	14	4	0	6	55%	27%	10%	3%	0%	4%	4.41
Developers/Landowners	72	30	23	3	2	9	52%	22%	17%	2%	1%	6%	4.28
City and County Governments	97	15	12	6	2	7	70%	11%	9%	4%	1%	5%	4.55
Independent Scientists	34	48	24	20	1	12	24%	35%	17%	14%	1%	9%	3.74
FWS/NMFS	109	18	4	1	0	7	78%	13%	3%	1%	0%	5%	4.78
State Officials	68	26	26	6	3	10	49%	19%	19%	4%	2%	7%	4.16
Congressional Representatives	11	24	58	22	5	19	8%	17%	42%	16%	4%	14%	3.12
Concerned Citizens	18	37	49	18	2	15	13%	27%	35%	13%	1%	11%	3.41
Orgs. Representing Land./Dev.	54	37	25	4	0	19	39%	27%	18%	3%	0%	14%	4.18

Question 10 - What groups were formed or appointed or will be formed to initiate and oversee the HCP development and implementation process? (circle all that apply)

- a) A steering committee consisting of major stakeholders in the HCP process was formed to develop the plan
- b) A team of scientists to assess the biological and ecological impacts of the plan
- c) A group of consultants to prepare the plan itself
- d) A team of major stakeholders in the HCP process to oversee the implementation of the plan
- e) Other \_\_\_\_\_
- f) No groups were formed

<sup>4</sup> The Participation index for the stakeholder group is derived by assigning participation points for each answer: A = 5, B = 4, C = 3, D = 2, E = 1, F&O = 0. The equation I used was  $(5A + 4B + 3C + 2D + E) / [139 - (F + O)]$ . I did not include respondents who didn't know the amount of representation of a group or who omitted the question when deriving the participation index of each group.



Table 10 - Groups formed		
	responded affirmatively	% of total respondents
Steering committee of major stakeholders to develop the plan (a)	123	89%
Team of scientists to assess biological & ecological impacts (b)	91	66%
Group of consultants to prepare the plan itself (c)	104	75%
Team of stakeholders to oversee implementation of the plan (d)	69	50%
Other (e)	18	13%
No groups were formed (f)	5	4%
Question omitted	2	1%

Question 11 - What is the membership of the HCP executive or steering committee? Please circle the categories below and indicate how many participants from each category served on the committee.

- a) Landowners/developers involved \_\_\_\_
- b) City and county officials \_\_\_\_
- c) State officials \_\_\_\_
- d) Organizations representing the interests of landowners/developers \_\_\_\_
- e) Environmental groups \_\_\_\_
- f) FWS/NMFS staff \_\_\_\_
- g) Other federal officials \_\_\_\_
- h) Concerned citizens \_\_\_\_
- i) Total committee membership \_\_\_\_
- j) There was not an executive or steering committee \_\_\_\_

**Table 11 - Who's at the table? Degree of representation of stakeholder groups\***

	Total # of Representatives	# Responses Listing Group	% of Responses Listing Group	Total Responses	Avg. Representation/Total Responses
(a) Developers/Landowners	218	57	85%	67	3.25
(b) City and County Officials	279	60	90%	67	4.16
(c) State Officials	206	56	84%	67	3.07
(d) Orgs. Representing Land./Dev.	133	54	81%	67	1.99
(e) Environmental Groups	203	65	97%	67	3.03
(f) FWS/NMFS	140	62	93%	67	2.09
(g) Other Federal Officials	127	40	60%	67	1.90
(h) Concerned Citizens	123	44	66%	67	1.84

\*Explanation of Columns

- Total Number of Representatives – sum of the number of people specified as on the steering committee from each group for every response received.
- Number of Responses Listing Group – Number of responses listing any representation at all of the group on the steering committee.
- Percentage of Responses Listing Group – Total responses divided by number of responses listing group.
- Total Responses – the total number of responses which answered question twelve.
- Avg. Representation/Total Response – Total number of representatives divided by total responses.

### Questions Combining Scientific, Economic, and Socio-political Issues and Questions Assessing Overall ESA/HCP Perceptions and Attitudes

Question 12 - In which areas has (the plan) been successful, or do you believe it will be successful? (circle all that apply)

- Promoting recovery of species covered under the plan
- Conserving species covered under the plan by maintaining current populations.
- Not costing an unreasonable amount of time and money
- Striking a compromise between the interests of landowners/developers and environmentalists.
- Engaging public participation

Table 12 - Areas of success (by plan)											
	# resp.	A	B	C	D	E	A	B	C	D	E
BCCP	16	5	12	8	12	5	31%	75%	50%	75%	31%
BREV	9	6	9	5	9	5	67%	100%	56%	100%	56%
CLRK	15	6	8	4	10	7	40%	53%	27%	67%	47%
LCRP	15	11	9	7	9	7	73%	60%	47%	60%	47%
NCCP	8	6	7	2	8	2	75%	88%	25%	100%	25%
SDMS	21	11	19	10	18	11	52%	90%	48%	86%	52%
SSAC	9	3	4	3	5	3	33%	44%	33%	56%	33%
TULR	18	8	9	5	9	7	44%	50%	28%	50%	39%
WASH	12	4	10	2	12	8	33%	83%	17%	100%	67%
WMJV	16	8	7	3	6	8	50%	44%	19%	38%	50%
TOTAL	139	68	94	48	98	63	49%	68%	35%	71%	45%

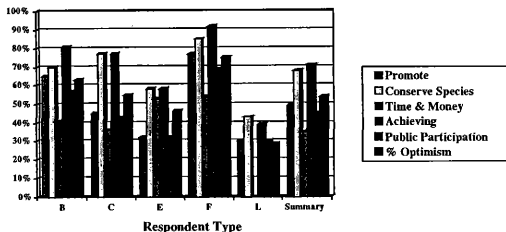


Fig. 9 - Areas of success (by respondent)

Question 15 - Compare (the plan) with a collection of individual habitat conservation by writing a letter in the space provided. (A=(the plan) will do a better job, B=individual plans would do a better job, C=no difference)

- a) Conserving the species \_\_\_\_\_
- b) Leading to the recovery of species \_\_\_\_\_
- c) Engaging public participation \_\_\_\_\_
- d) Including sufficient scientific data \_\_\_\_\_
- e) Preventing non-endangered species covered under the plan (if any) from becoming endangered \_\_\_\_\_
- f) Striking a compromise between development and species protection that both landowners and environmentalists can accept \_\_\_\_\_

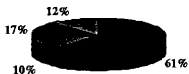
a) Conserving the Species



b) Leading to Recovery



c) Engaging Public Participation



d) Sufficient Scientific Data



e) Preventing Species Listing



f) Striking an Acceptable Compromise



**Fig 10 - Evaluating regional vs. individual plans using multiple variables**

Question 16 – After going through the beginning stages of the HCP planning process, how would you describe your overall attitude towards endangered species conservation under the Endangered Species Act:

- a) Improved tremendously
- b) Improved slightly
- c) No change

- d) Worsened slightly  
e) Worsened tremendously

**Table 13 - Changes in ESA attitudes (by plan)**

	# resp.	A	B	C	D	E	O	A	B	C	D	E	O
BCCP	16	0	4	6	2	3	1	0%	25%	38%	13%	19%	6%
BREV	9	0	0	3	4	1	1	0%	0%	33%	44%	11%	11%
CLRK	15	2	4	4	2	2	1	13%	27%	27%	13%	13%	7%
LCRP	15	1	2	9	0	1	2	7%	13%	60%	0%	7%	13%
NCCP	8	1	4	3	0	0	0	13%	50%	38%	0%	0%	0%
SDMS	21	6	3	5	3	2	2	29%	14%	24%	14%	10%	10%
SSAC	9	0	1	7	1	0	0	0%	11%	78%	11%	0%	0%
TULR	18	0	1	5	5	5	2	0%	6%	28%	28%	28%	11%
WASH	12	2	4	1	2	3	0	17%	33%	8%	17%	25%	0%
WMJV	16	0	1	6	4	4	1	0%	6%	38%	25%	25%	6%
TOTAL	139	12	24	49	23	21	10	9%	17%	35%	17%	15%	7%

**Table 14 - Changes in ESA attitudes (by respondent)**

	# resp.	A	B	C	D	E	O	A	B	C	D	E	O
B	37	2	9	17	6	2	1	5%	24%	46%	16%	5%	3%
C	47	6	11	13	9	6	2	13%	23%	28%	19%	13%	4%
E	19	1	2	5	2	3	6	5%	11%	26%	11%	16%	32%
F	13	2	2	7	0	1	1	15%	15%	54%	0%	8%	8%
L	23	1	0	7	6	9	0	4%	0%	30%	26%	39%	0%
TOTAL	139	12	24	49	23	21	10	9%	17%	35%	17%	15%	7%

### Descriptions of Planning Documents

The following list of RMSHCPs studied contains the names of the planning documents reviewed for this project, along with key points of the documents which pertain to the three areas of inquiry of this study: ecology, economy, and the socio-political aspects of RMSHCPs.

#### BCCP – Draft Habitat Conservation Plan, 3/96

- 1988 - executive committee formed to develop Balcones Canyonlands Conservation Plan.
- Formation of Biological Advisory Team (BAT), issued report in 1990
- Held 3 public meetings – major issues were funding and preserve design
- Mitigation took the form of the creation of a 30,000 acre preserve, funded by the purchase of participation certificates by landowners and developers

#### BREV – Executive Summary of Draft Brevard Scrub Conservation and Development Plan, 8/95

- 1992, a six-member Citizen Steering Committee comprised of different interests was formed to develop a county-wide HCP. Decisions made by unanimous consent

- Brevard Co received a \$300,000 federal grant to fund planning process
- Plan had a voluntary Technical Review Panel
- A Scrub Sanctuary of 9,000 – 10,000 acres was proposed
- \$50 million in land acquisition needed to occur, plus \$1 million per year for management.
- Money to be raised through mitigation fees

**CLRK** – Clark County MSHCP Preliminary Draft, 1/98

- Discussions began in 5/96
- Claims to be most comprehensive HCP ever: 224 species addressed, 75 covered, 5 listed
- Objectives include: reducing the likelihood of listing additional species and allowing landowners relief from having to process future permits
- Established a Biological Advisory Committee and have held a public meeting
- MSHCP an outgrowth of the Desert Conservation Plan (DCP) to protect the desert tortoise
- 90% of study area is federally owned

**LCRP** – Lower Colorado River Multi-species Conservation Program overview, 2/98

- Steering committee composed of USDO agencies, wildlife and water mgmt. Agencies from AZ, CA, and NV, Indian Tribes, providers of water and hydroelectric power, and environmental and conservation organizations was formed in 1993. Includes a biological subcommittee.
- Three objectives: Accommodate water and power development, conserve habitat and recover species, reduce likelihood of additional listings
- AZ, NV, CA, and DOI entered into a memorandum of agreement (MOA) which formally adopted the multi-species ecosystem-based approach for resolving endangered species and habitat issues, and stipulated that interim conservation measures (ICMs) to benefit species and habitats must be identified and implemented during plan development.
- Takes steps to ensure the MSCP process is conducted in an open and public atmosphere
- Budget of \$4.5 million over 3 years to develop the MSCP and implement ICMs provided by states and DOI agencies

**NCCP** – Central and Coastal Subregion Natural Community Conservation Plan / Habitat Conservation Plan, 12/95

- A working group, including environmental interests, landowners, CDFG and FWS staff reviewed and discussed planning issues concurrent with preparation of the HCP
- Scientific Review Panel (SRP) created
- habitat based HCP
- Discussions begun in 1990
- First approved Natural Community Conservation Plan
- California Department of Fish and Game (CDFG) responsible for overseeing development of the plan

**SDMS** – Executive Summary, 8/96

- Claims economic benefits from decreasing costs of compliance with federal and state conservation laws and reducing constraints on future development
- Emphasizes cooperative development of plan, many parties involved in all stages of process

- Local jurisdictions responsible for implementing subarea plans
- 3 methods for assembling the MSCP preserve:
  - conservation of lands already in public ownership;
  - public acquisition of private lands with regional habitat value from willing sellers; and
  - private development contributions through development regulations and mitigation of impacts (p.9 MSCP plan).
- Touts equitable distribution of costs between fed, state, and local gov'ts and private sector, landowners responsible for 36.7% of preserve, or 63,170 acres.
- Total implementation costs - \$339 - \$441 million
- Babbitt calls the MSCP "the jewel of habitat conservation plans" and "the latest and best example of a new era in American conservation."

#### SSAC – Feasibility study, 5/96

- Research committee established by developers to work with consultant to prepare fees.
- County-owned, habitat based HCP, claims it will result in faster, streamlined permitting process, lower legal and consulting fees
- Total costs not estimated in study. Mitigation banks one method of funding.
- Seem committed to public participation, lack of scientific knowledge concerning vernal pools and delicate ecosystems, seem to desire bare minimum of conservation
- Plan still in very early stages, much undecided

#### TULR –

- 1991, 13 members representing "multi-interests" formed HCP Advisory Committee. Heavily weighted in favor of landowner/developer interests and city/county officials. Technical advisory subcommittee also existed.
- Goals of plan included shared financial responsibilities for conservation among Tulare Co. residents, not having an adverse financial impact on the county, avoiding converting croplands to habitat
- Draft plan slated to have been completed in 2/98
- 6/97 – Tulare County Association of Governments (TCAG) suspends program based upon CDFG given the authority to issue incidental take permits for the California Endangered Species Act
- On 1/26/98 TCAG adopted a recommendation from the HCP Advisory Committee to suspend the HCP project.
- 95% of proposed planning area was private lands
- Methods of mitigation – establish reserves, maintain open space values in other habitats

#### WASH – HCP, 12/95

- Steering committee representing many interests established in 1990
- Mitigation strategy – acquisition of habitat, fencing, enforcement, education, and removal of competing uses
- Plan will be funded by county-wide fees for building permits and land clearing
- Plan claims to enhance survival of desert tortoise

- Coordinates with the desert tortoise recovery plan occurred, and recovery plans for the Siler pincushion cactus and dwarf bear-claw poppy were consulted.
- Land for reserve acquired by encouraging landowners to participate in HCP and be covered by the ITP, using Land and Water Conservation Fund (LWCF) money, BLM – private land exchange, BLM – state school trust land exchange.

**WMJV** – No available documents

## Discussion

### **Ecology**

#### **Recovery and Producing a Net Benefit to the Species**

According to Section 10(a), issuance of an Incidental Take Permit must not appreciably reduce the “likelihood of the survival and recovery of the species in the wild” (section 10(a)(2)(B)). Yet, regarding this restriction, the Fish and Wildlife Service and National Marine Fisheries Service’s (the Services’) “*Habitat Conservation Planning Handbook*” (1996) clearly asks the reader to “note that this [restriction] does not explicitly require an HCP to recover listed species, or contribute to their recovery objectives outlined in a recovery plan” (FWS and NMFS 1996).

The ESA’s goal of recovery is inconsistent with HCP policy. For example, examine the results of question one: “How would you describe the future ecological consequences of (the plan)?” Despite the Services’ assertion that an HCP need not lead to the recovery of the species, 32% of the total respondents claimed that the HCP in question would “contribute significantly to the recovery of populations.” Further, Table 10 demonstrates that the nearly half (49%) of the biologists who responded to the survey agreed that the plan in question would lead to recovery of populations. This is significant as independent and government biologists likely possess significant ecological knowledge.



In addition, Table 9 offers further insight into perceptions of the ecological success of the plans. Four HCPs had 50% or more of their respondents claim that the plan would lead to species recovery. Those plans were the Brevard County HCP (67%), San Diego MSCP (57%), Lower Colorado MSCP (53%), and Central/Coastal NCCP (50%). The four plans with the lowest percentage of respondents believing their plan would lead to recovery were the Balcones plan (6%), the Tulare County plan (11%), the West Mojave plan (13%), and the Washington County plan (17%).

Section 10(a) of the ESA and the HCP Handbook both contend that species recovery is not specifically required. However, recovery is the goal of the ESA. According to Section 2(b) of the ESA, “The purposes of this act are to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be *conserved*, to provide a program for the *conservation* of such endangered species and threatened species” (italics added). The act further defines conservation as “the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this act are no longer necessary,” in other words, to recover the species (Defenders 1998).

That nearly one-third of respondents claim that RMSHCPs are taking steps toward recovery is positive. More than half of survey participants (58%) also claimed that recovery plans were consulted in developing the plan. One sign that the future of habitat conservation planning may place a greater importance on recovery comes from a testimony by FWS Region 1 Director Michael Spear who stated that “The [San Diego] MSCP will provide for the recovery of covered species within the proposed reserve...,” suggesting that recovery is the goal of that plan (Defenders 1998). By promoting species recovery, it is hoped that these highly visible, regional,

multi-species HCPs will help set a precedent for subsequent HCPs to also take the additional steps to provide for species recovery.

Is conservation planning for species recovery a general trend among HCPs, or one unique to RMSHCPs? Question fifteen “b” asks respondents whether they believe RMSHCPs or individual HCPs would do a better job in “leading to the recovery of species.” Sixty percent of respondents claimed that RMSHCPs would do a better job while 10% believed individual plans do better, 18% believed there was no difference between the two types of plans, and 12% omitted the question. Although RMSHCPs most certainly further the trend towards planning for recovery, 60% of respondents claiming that these plans do a better job than individual plans is not a high enough percentage to convince me that planning for recovery is unique to RMSHCPs. More likely, these figures are indicative of a general trend in conservation planning of achieving species recovery, though the adoption of recovery planning by RMSHCPs may add credibility and visibility to the biological benefits of this action for covered species.

Question twelve asks the respondents to circle the areas in which the plan will be successful. Forty-nine percent of the total respondents and 65% of the biologists who responded circled the statement, “Promoting recovery of species covered under the plan.” Though this question is nearly identical in content to question one, a significantly higher number of respondents believed the plan would lead to species recovery. I would contend that this discrepancy is due to the fact that question 12 offered only two options, promote recovery or doesn’t promote recovery, and respondents were not explicitly given the “small but positive effect” or “no effect on populations” options offered in question one. Therefore, in measuring participants’ perceptions on whether or not a plan will lead to recovery of populations, question one offers the more accurate results.

The Services' policy on whether or not an HCP must have a net benefit on species covered by the plan is similar to their policy towards recovery. Once again, the HCP Handbook clearly states, "No explicit provision of the ESA or its implementing regulations requires that an HCP must result in a net benefit to affected species." The handbook goes on to suggest that "Wherever feasible, the FWS and NMFS should encourage HCPs that result in a 'net benefit to the species'" (FWS and NMFS 1996). Like the policy towards recovery, not requiring HCPs to have a net benefit on covered species runs counter to the overall goals of the ESA.

Respondents' perceptions of whether the plans will have a net benefit on populations can be measured by the sum of those who answered question 1 with "a," "The plan will contribute significantly to the recovery of populations," or "b," "The plan will have a small but positive effect on populations." Overall, 77% believed the plan would have a net benefit for the species, and so go above and beyond the minimum requirements for habitat conservation plan approval.

A few of the results to this question deserve special attention. All of the respondents for the NCCP as well as all of the FWS agents surveyed responded that the plan would have a net benefit for species. Two questions spawned by these results are: "Does the text of the NCCP go above and beyond other plans to include mitigation techniques with the purpose of providing a net benefit to species, supporting the claims of the respondents?" and "Will optimism towards biological issues be a trend in the responses of FWS staff?"

On the other end of the scale of perceptions of net benefits was the West Mojave plan (44%) and the landowner/developer category of respondents (43%). Once again, similar questions arise from the low perceptions of net benefits. For example, questions arise concerning the actual contents of the West Mojave planning documents and a possible cynicism or bias among landowners surveyed.

One last observation I will make concerning question one is the percentage of respondents who answered “d” or “e”, “The plan will have a small but negative effect...” or “The plan will contribute significantly to the extinction of populations.” The sum of these answers represents a perception of non-compliance with the terms of the Incidental Take Permit. Eight percent of the total participants believed their plan may be in violation of Section 10(a) by having an adverse effect on populations. Balcones plan (13%), West Mojave plan (19%), and San Diego MSCP (10%) respondents all had at least 10% of their sample perceive the plan as being in violation of the terms of the ITP. Similarly, 17% of landowners and a surprising 21% of environmentalists who responded believed the plans would negatively affect species.

#### **Use of Science in HCP Planning Process**

One of the greatest criticisms of RMSHCPs is that they lack input from the scientific community and sound scientific data. Nearly three-fourths of respondents believed independent scientists contributed to the development of the plan. Although this number appears high, it seems that independent scientific input would be absolutely essential to a large scale plan, and that ideally this number would be higher. Whether or not three-fourths of the plan actually did receive assistance from independent scientists is another question entirely.

In a report issued from a meeting of prominent scientists at Stanford University, the creation of “a standing body of independent scientists to establish minimum scientific and management standards for multiple-species HCPs” was strongly recommended (p.93 def). Two-thirds of respondents knew of the existence of a team of scientists to assess biological and ecological impacts of the plan. The next step is to compare this number with how many plans described a biological review team in the actual plan, and how much influence this team of

scientists truly had in plan development. For example, a Biological Assessment Team (BAT) was created in 1990 to make a recommendation on what would be necessary to conserve viable populations of the endangered species covered under the Balcones plan. The team was instructed repeatedly not to consider economic or political factors in their study, and in the end the team's recommendation proved politically impossible to implement. The team was dissolved soon after, and so had little input at all in the final plan approved in 1996 (p. 38 defenders).

The response to part "b," question 15, reflects the concern many conservationists have as to how effective large, complex plans are in including sufficient scientific data to account for the size and complexity of an entire ecosystem. Although over half (56%) of respondents still believed that RSMHCP would do a better job than individual plans, 14% of respondents actually believed that individual plans would be more likely to include sufficient scientific data. This section of question 15 had the lowest number of respondents favoring RSMHCPs and the highest number of respondents favoring individual plans of the six categories of comparison addressed by the question.

### **Using the Multi-species, Multi-habitat Approach to Prevent Listing**

Only one question in the survey addressed the perceived benefits of RSMHCPs for unlisted species covered by the plan. Two-thirds of the applicants contended that large-scale plans would do a better job than individual plans of preventing non-endangered species from becoming endangered, while only 4% believed individual plans would be more effective, the lowest percentage of respondents favoring individual plans in the six categories of question 15.

## **Economy**

### **Economic and Administrative Effects of Landowners and Developers**

Responses to questions three and four, measuring the existence and degree of economic and administrative effects on landowners and developers were similar. Fourteen percent of respondents from each question answered that the economic or administrative consequences of the plan for landowners and developers would be “a strong hindrance to development.” The bulk of this 14% was made up of landowners, followed by city and council officials, with FWS staff, environmentalists, and scientists comprising a very small percentage of this total.

The largest group of respondents answered that the economic and administrative effects would be an accepted cost or consequence of development. The next largest group of respondents described the economic and administrative effects as “an inconvenient hurdle to cross prior to development.” The answers to these questions appeared highly biased. Yet, overall, respondents seemed to regard the effects as being somewhere between an inconvenient hurdle and favorable to the landowner. Seventy-four percent and 75% of respondents to questions 13 and 14, respectively, answered “b” or “c” or “d,” indicating that the majority of stakeholders in the planning process don’t see the economic and administrative effects of the RMSHCP as much of an obstruction to the planning process or an insurmountable barrier to development.

### **Money and Time Spent on the Planning Process**

More than half of the respondents said that the cost of developing the plan alone (consultant fees, salaries of land planners, etc.) has exceeded or would exceed 1 million dollars by the time the plan was approved. This figure does not include the costs of land acquisition and

plan implementation which are generally many millions of dollars above the costs of plan development.

Perhaps just as frustrating to all stakeholders involved in the planning process is the time spent developing the plan. Forty-five percent of respondents said that it took or would take at least four years between the time negotiations began and an incidental take permit was issued. The time and money spent developing the plans are major causes of disenchantment in the RMSHCP planning process among all involved groups.

### **Effects of RMSHCPs on Regional Economies**

Question seven measured participants' perceptions of the effect of RMSHCPs on regional economies. There was a significant discrepancy in the responses received based on classification of respondent. Biologists and FWS officials appeared extremely optimistic. In each category, 46% claimed that RMSHCPs would produce a positive effect on the economy. Not one individual from either category perceived RMSHCPs as having a negative effect on the regional economy.

On the other hand, less than 5% of landowners and developers surveyed believed the effects on the economy would be positive. A whopping 65% contended that the plan would have a negative effect on the economy. City and County officials' and environmentalists' responses paralleled the average responses for the question across all categories of participant.

When regional, multi-species plans were compared with the effects that individual HCPs would have on the economy (Table 8), the results were much the same. Biologists and FWS officials were once again optimistic. Eighty-four percent of respondents from each category

declared the effects of RMSHCPs would be better in some degree than individual plans, while only one respondent from both categories combined believed that RMSHCPs would be worse.

Only 5% of landowners saw RMSHCPs as having a more positive effect on the economy than individual plans, while over half perceived individual plans as being to some degree better for the regional economy than multi-species plans. Once again, the responses of environmentalists and city and county officials paralleled the average responses for the question.

### **Fairness of the Allocation of Costs of Endangered Species Conservation**

Respondents' perceptions of who bears the costs of endangered species conservation and who should bear the costs were similar. Although many groups grumble about the oppressive costs of endangered species conservation in specific cases, overall participants believed that this allocation of costs was fair. Therefore, if stakeholders understand how the costs of habitat conservation planning fit into the overall model of who should be responsible for these costs, perhaps stakeholders would be more likely to accept their socially allocated share of the costs.

The results show that the federal government was the entity perceived as most responsible for the costs of conservation, followed closely by landowners and developers, then local governments, then state governments. Far behind were environmentalists and concerned citizens.

### **Socio-political**

#### **Participation and Representation**

Comparisons of participation indices with responses to question 11 suggested differences in degree of participation and influence with representation on RMSHCP steering committees.



According to question 9, city and county officials have the most representation on RMSHCP steering committees, followed by landowners and developer, state officials, and then environmental groups. Yet neither of these four had the highest degree of participation in the HCP planning process. The FWS had the highest participation index, followed by city and county officials, then environmental groups, then landowners and developers. Although state officials still had high participation indices, they were ranked sixth behind organizations representing the interests of landowners and developers and the four groups mentioned above.

Though the average representation of FWS officials on steering committees was half that of city and county officials, they were ranked as having the greatest role in the HCP development process. This and other discrepancies between representation on the HCP steering committee and the degree of influence groups had in the planning process are somewhat disturbing.

Representation of diverse interests on steering committees is often touted by plan developers as the ultimate avenue for public participation and cooperation of many groups. Yet, how much of a role do those with a seat truly play in the HCP development process? Can a group have a large influence on the outcome of a plan and yet have little representation on a steering committee? Can an interest be largely represented on a steering committee and yet not be allowed a substantive role in the HCP development process? The answers to these two questions as well as anecdotal evidence seems to point to yes. Ultimately, it is the discordance between actual participation in the HCP process and representation which must be addressed.

### **Areas of Success in Regional, Multi-species Conservation Planning**

One of the most highly proclaimed successes of RMSHCPs is that they bring many parties to the table to work out a solution acceptable to all sides. This was substantiated by the

results of question 12, in which compromise was the greatest area of perceived success, with 71% of respondents claiming RSMHCPs to be successful in this area. I was surprised that less than half of respondents claimed RSMHCPs were successful in the area of engaging public participation, promoting species recovery, and in terms of not costing an unreasonable amount of time and money.

Lack of success in the areas of recovery and time and money spent are unfortunate but are supported by the terms outlined in the HCP handbook regarding the absence of a mandate for HCPs to recovery species, and in questions five and six which depicted huge amounts of money and many years spent developing plans.

The calculation of percent optimism of respondent categories revealed FWS personnel and biologists as the most optimistic regarding RSMHCPs potential for success across many areas, while environmentalists and landowners and developers, despite efforts to appease both groups (for example, by offering greater regulatory relief for landowners), were significantly lower.

When compared with individual HCPs, RSMHCPs were favored nearly two-thirds of the time in six areas of inquiry. RSMHCPs were favored by the highest percentage in conserving the species and preventing species listing. Though RSMHCPs had the highest percentage of support across all categories, that percentage was lowest in the categories of leading to recovery and including sufficient scientific data. Individual HCPs hit a high in including scientific data (14%), and a low in preventing species listing (4%).

## **Changes in Overall Attitudes Toward the ESA**

Question 16 was included to assess participants' attitudes regarding the RMSHCP planning process, and to determine if their experiences gave them a greater willingness to participate in further endangered species conservation. Clearly, a backlash among private landowners was apparent. Only 4% had improved attitudes towards endangered species conservation, while 65% said their attitudes had worsened. In fact, the most popular response with private landowners was "d," their attitudes had worsened tremendously. Such negative attitudes are problematic as landowner cooperation is currently essential to the success of HCPs.

In the future, should the Services use the carrot or the stick? Should the Services continue to increase regulatory assurances for landowners or attempt to force them into compliance with the ESA, or somehow circumvent them in the conservation planning process?

## **Conclusions**

1. RMSHCPs oftentimes will include all or almost all individuals of a remaining species within their scope. Unless they act as pseudo-recovery plans, they will not further the survival of the species, they may be in violation of the ESA, and they may not have the support of the environmental community. RMSHCPs (such as the San Diego MSCP) been set precedents by making recovery a goal of the RMSHCP.
2. The FWS is often overoptimistic and unrealistic in their perceptions of the success of RMSHCPs.
3. Landowners were the most disgruntled group, yet more and more assurances are being made for them, and they had a high level of participation and representation in the planning

process. Landowners and developers have a voice in the planning process (representation), they're being heard (participation), people are responding to their concerns (by increasing regulatory assurances), and yet their attitudes show a lack of confidence in the planning process. Other creative ways must be found to encourage landowners to cooperate in RSMHCP programs.

4. Representation in the HCP planning process is not equivalent to extent of participation and influence in the process.
5. Participants of RSMHCPs perceived the actual responsibility for the costs of endangered species conservation falling upon those entities whom participants believed should be bearing the costs of endangered species conservation.
6. One cannot focus solely on ecology (i.e. the Biological Advisory Team in the Balcones plan), or economics, or participation (i.e. Brevard Co. Plan). The success of RSMHCPs is dependent upon the integration and cooperation among all three of these areas.
7. RSMHCPs are preferred over individual plans by stakeholders across ecological, economic, and socio-political criteria.
8. Successful plan development hinges on the development of a plan in which the **perceived** benefits to stakeholders outweigh **perceived** costs.

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## Appendix A – Survey and Cover Letter

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Dear participant,

I am an undergraduate student at Texas A&M University conducting a survey of attitudes regarding Habitat Conservation Plans (HCPs). I am doing this to fulfill the requirements of my senior thesis, and to gather data that may be used to evaluate HCP policies. My objective in this project is to determine the actual and perceived costs and benefits of regional, multi-species Habitat Conservation Plans.

You were chosen for this study because of your experience in the HCP planning process, in particular with (the plan). The success of this research will be determined by your honest and informed replies. As a stakeholder in the Habitat Conservation Plan process, this is an opportunity for you to voice your concerns and perceptions regarding the HCP process.

Your participation is critical to the success of this study. Please take the time to fill out the enclosed survey and mail it back in the enclosed self-addressed, stamped envelope by **January 10th, 1998**. The survey is anonymous. You are under no obligation to answer any or all of the questions.

If you have any questions, comments, or concerns about the survey or the project, do not hesitate to contact me at the address and phone number listed below. Thank you for taking the time to participate in this study.

Sincerely,

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Please answer the following questions by circling the letter of the one best answer, unless instructed to do otherwise.

How would you describe the future ecological consequences of (the plan)?

- a) The plan will contribute significantly to the recovery of populations.
- b) The plan will have a small but positive effect on populations.
- c) The plan will have no effect on populations.
- d) The plan will have a small but negative effect on populations.
- e) The plan will contribute significantly to the extinction of populations.

To the best of your knowledge, what sources of assistance will be used in developing (the plan)? (circle all that apply)

The National Academy of Sciences

Environmental groups

United States Geological Survey

Independent Scientists

Recovery plans for the species covered

USFWS/NMFS

other \_\_\_\_\_

The economic effects (the plan) will have on landowners/developers could be best described as:

- a) A strong hindrance to development
- b) An inconvenient economic hurdle to cross prior to development
- c) An accepted cost of development
- d) Favorable to the landowner/developer
- e) Very favorable to the landowner/developer

What effect will the administrative aspect of developing (the plan); including paperwork, time spent developing the plan, meetings, and consultations; have on the landowners/developers involved?

- a) The administrative aspect of developing the plan will be a strong hindrance to development.
- b) The administrative aspect of developing the plan will be an inconvenient hurdle to cross prior to development.
- c) The administrative aspect of developing the plan will be an accepted consequence of applying for an Incidental Take Permit and was not considered to be a burden.
- d) The administrative aspect of developing the plan will have no effect on the landowners/developers.

After the plan has been completed, what would you estimate to be the total costs of developing (the plan), from its initiation to issuance of the Incidental Take Permit

- a) Less than \$5,000
- b) \$5-10,000
- c) \$10-50,000
- d) \$50,000-100,000
- e) \$100,000-500,000
- f) \$500,000-\$1,000,000
- g) More than \$1,000,000



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How long do you believe the permitting process will take, from its initiation to issuance of the Incidental Take Permit for (the plan)?

- a) Less than 6 months
- b) 6 months - 1 year
- c) 1 - 1.5 years
- d) 1.5 - 2 years
- e) 2 - 3 years
- f) 3 - 4 years
- g) more than 4 years

What effect will (the plan) have on the regional economy and on the number of jobs available in the region?

- a) The plan will have a positive effect on the regional economy.
- b) The plan will have no effect on the regional economy.
- c) The plan will have a negative effect on the regional economy.

Do you believe that (the plan) will have a \_\_\_\_\_ effect on the regional economy when compared to the effects of individual HCPs.

- a) Significantly better
- b) Slightly better
- c) No effect
- d) Slightly worse
- e) Significantly worse

Indicate whether the following stakeholders are represented in the HCP development and implementation process by marking the appropriate letter in the space provided.

A = Party has a major role in the HCP development and implementation process.

B = Party has adequate opportunity to participate in the HCP development and implementation process, and has had a substantial but not major role in the process.

C = Party has adequate opportunity to participate in the HCP development and implementation process, but has had very little or no role in the process.

D = Party has little opportunity to participate in the HCP development and implementation process, and has had little role in the process.

E = Party has no opportunity to participate in the HCP development and implementation process and has had no role in the process.

F = Don't know

- a) Environmental groups \_\_\_\_\_
  - b) Developers/landowners \_\_\_\_\_
  - c) City and county governments \_\_\_\_\_
  - d) Independent scientists \_\_\_\_\_
  - e) FWS/NMFS \_\_\_\_\_
  - f) State officials \_\_\_\_\_
  - g) Congressional representative \_\_\_\_\_
  - h) Concerned citizens \_\_\_\_\_
  - i) Organizations representing the interests of landowners/developers \_\_\_\_\_
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What groups were formed or appointed or will be formed to initiate and oversee the HCP development and implementation process? (circle all that apply)

- a) A steering committee consisting of major stakeholders in the HCP process was formed to develop the plan
- b) A team of scientists to assess the biological and ecological impacts of the plan
- c) A group of consultants to prepare the plan itself
- d) A team of major stakeholders in the HCP process to oversee the implementation of the plan
- e) Other \_\_\_\_\_
- f) No groups were formed

What is the membership of the HCP executive or steering committee? Please circle the categories below and indicate how many participants from each category served on the committee.

- a) Landowners/developers involved \_\_\_\_\_
- b) City and county officials \_\_\_\_\_
- c) State officials \_\_\_\_\_
- d) Organizations representing the interests of landowners/developers \_\_\_\_\_
- e) Environmental groups \_\_\_\_\_
- f) FWS/NMFS staff \_\_\_\_\_
- g) Other federal officials \_\_\_\_\_
- h) Concerned citizens \_\_\_\_\_
- i) Total committee membership \_\_\_\_\_
- j) There was not an executive or steering committee \_\_\_\_\_

In which areas has (the plan) been successful, or do you believe it will be successful? (circle all that apply)

Promoting recovery of species covered under the plan

Conserving species covered under the plan by maintaining current populations.

Not costing an unreasonable amount of time and money

Striking a compromise between the interests of landowners/developers and environmentalists.

Engaging public participation

Who bears the costs of endangered species conservation? (number in order, with 1 being the party bearing the most costs of endangered species conservation, and 5 bearing the least)

- a) The federal government/taxpayers \_\_\_\_\_
- b) The state government \_\_\_\_\_
- c) County and city governments in areas covered by the plan \_\_\_\_\_
- d) Landowners/developers \_\_\_\_\_
- e) Environmental groups and other concerned citizen groups \_\_\_\_\_

Who should bear the costs of endangered species conservation? (number in order, with 1 being the party most responsible for bearing the costs of conservation, and 5 being least responsible)

- a) The federal government/taxpayers \_\_\_\_\_
  - b) The state government \_\_\_\_\_
  - c) County and city governments in areas covered by the plan \_\_\_\_\_
  - d) Landowners/developers \_\_\_\_\_
  - e) Environmental groups and other concerned citizen groups \_\_\_\_\_
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Compare (the plan) with a collection of individual habitat conservation by writing a letter in the space provided. (A=(the plan) will do a better job, B=individual plans would do a better job, C=no difference)

Conserving the species \_\_\_\_\_

Leading to the recovery of species \_\_\_\_\_

Engaging public participation \_\_\_\_\_

Including sufficient scientific data \_\_\_\_\_

Preventing non-endangered species covered under the plan (if any) from becoming endangered \_\_\_\_\_

Striking a compromise between development and species protection that both landowners and environmentalists can accept \_\_\_\_\_

After going through the beginning stages of the HCP planning process, how would you describe your overall attitude towards endangered species conservation under the Endangered Species Act:

- a) Improved tremendously
- b) Improved slightly
- c) No change
- d) Worsened slightly
- e) Worsened tremendously

In developing this survey, some good questions may have been left out, or the best answer to a question may not have been one of the choices. If you have additional comments you would like to include in this survey, please do so below.

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## Appendix B - Glossary

### Glossary

**Endangered species** – "... any species [including subspecies or qualifying distinct population segment] which is in danger of extinction throughout all or a significant portion of its range." [Section 3(6) of ESA]

**Threatened species** – "... any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range" [Section 3(19) of the ESA].

**"Covered Species"** – Unlisted species that have been adequately addressed in an HCP as though they were listed, and are therefore included on the permit or, alternately, for which assurances are provided to the permittee that such species will be added to the permit if listed under certain circumstances. "Covered Species" are also subject to the assurances of the "No Surprises" policy (FWS and NMFS, p.8-1)

**Mitigation** – The process of moderating, reducing, or alleviating the impacts of a proposed activity, including: a) avoiding the impact (to the extent practicable); b) minimizing the impact; c) rectifying the impact or reducing or eliminating the impact over time; or d) compensating for the impact by replacing or providing substitute resources or environments (p.3-19).

**Habitat-Based HCP** – This approach may address all species within habitat-types within the plan area, or habitat-types in conjunction with a specific list of species that will be covered by the permit. Species covered by the HCP may include proposed and candidate species. This requires the Services to analyze the effects of the proposed HCP on those species not listed to be reviewed under Section 10(a) as if they were listed. Indicator species are generally used to set management parameters for the covered habitat in the HCP. A further test must be completed to ensure that the needs of all endemic and sensitive species associated with the covered habitat types are adequately addressed in the HCP. (3-38 HCP, defenders)

**Programmatic HCP** – Programmatic HCPs have been developed by the FWS for County and State governments that need an HCP to address a group of actions as a whole, rather than one at a time in separate HCPs. The programmatic HCP allows numerous entities to be involved in the HCP through "Certificates of Inclusion" or "Participation Certificates," which convey the take authorization of the official section 10(a)(1)(B) permit to the certificate recipient. (3-38 HCP, defenders)

**"No Surprises"** – The No Surprises policy provides regulatory assurances to the holder of and incidental take permit that no additional land use restrictions or financial compensation will be required of the permit holder with respect to species adequately covered by the permit, even if unforeseen circumstances arise after the permit is issued indicating that additional mitigation is needed. (Federal Register p.29091)